

UNIT PRICE CATALOG

1014 Catalog Entries

REPLACEMENT SHEET**Location Factor:****Sales Tax:****@ Ave Sub Gen'l Conditions:**

System	Description	Base Unit Cost
col_sprd_ftg	3000 PSI concrete forms, rebar, concr, placing, finish	\$291.00
	3000 PSI concrete Not Reqd (Trench Footing)	\$0.00
1	12" thick x 18" wide; forms, reinf, direct chute	\$10.76
2	12" thick x 24" wide; forms, reinf, direct chute	\$16.04
3	(For Precast Foundations) 12" thick x 24" wide; 3/4" stone bedding	\$2.22
fdn_drain		
1	PVC 4" dia; gravel drain bed	\$4.00
2	PVC 6" dia; gravel drain bed	\$5.00
	4" high foundation:	
1	Poured-8"; bitum/damp; sill plates	\$25.60
2	Poured-10"; bitum/damp; sill plates	\$28.26
3	Poured-10"; brick ledge; bitum/damp; sill plates	\$32.04
4	Poured-12"; bitum/damp; sill plates	\$32.60
5	Poured-12"; brick ledge; bitum/damp; sill plates	\$36.38
6	Block-8", grouted; bitum/damp; parging; sill plates	\$42.68
7	Block-10", grouted; bitum/damp; parging; sill plates	\$50.44
8	Block-12", grouted; parging; bitum/damp; sill plates	\$58.20
9	Pre-Cast Wall System; 1" Rigid Insul (R-5), furring ribs; sill plates	\$40.63

FIGURE 2a

MASTER [BASELINE] Resi-Cost™						
Berrien City, MI		Cost Adjustments				
Adjusted Unit Cost	Unit	Loc Fctr	S Tax	Sub	GC	
\$278.75	CY	0.93	3.00%	0%	0%	
\$0.00	LF					
\$10.31	LF	0.93	3.00%	0%	0%	
\$15.36	LF	0.93	3.00%	0%	0%	
\$2.13	LF	0.93	3.00%	0%	0%	
\$3.83	LF	0.93	3.00%	0%	0%	
\$4.79	LF	0.93	3.00%	0%	0%	
\$24.52	LF	0.93	3.00%	0%	0%	
\$27.07	LF	0.93	3.00%	0%	0%	
\$30.69	LF	0.93	3.00%	0%	0%	
\$31.23	LF	0.93	3.00%	0%	0%	
\$34.85	LF	0.93	3.00%	0%	0%	
\$40.88	LF	0.93	3.00%	0%	0%	
\$48.32	LF	0.93	3.00%	0%	0%	
\$55.75	LF	0.93	3.00%	0%	0%	
\$38.91	LF	0.93	3.00%	0%	0%	

REPLACEMENT SHEET

FIGURE 2b

ENERGY MODEL

MASTER [BASELINE] Rest-Cost™

Cost Management

 TOTAL FINISHED AREA (TFA): 2,400 SF
 TOTAL CONSTRUCTED AREA: 4,764 SF

Enter:	State	Residential Energy Code	Comments
MI	Michigan	Michigan Uniform Energy Code Part 10 Rules, less stringent than 1992 MEC	Yes Prior to June 22, 1997, the state of Michigan had no building energy efficiency requirements. On July 27, 1985, the state adopted ANSI/ASHRAE/IES Standard 90A-1980 statewide. SB 719, signed in early January 1996, repealed the 1985 adoption of the 1993 MEC. The legislation directed the state construction code commission to, by April 1, 1997, provide cost-effective standards and establish a program to provide home buyers with energy rating information. The Michigan Uniform Energy Code Part 10 Rules were adopted March 31, 1999.

Envelope Heat Loss	Area (SF)	R-Value	U Factor	Delta T	Heat Loss (BTUH)
Heat Loss-Basement Walls-ENERGY STAR	1,479	15	0.07	22	2,169
Heat Loss-Basement Floor (or Ground Flr Slab)	1,500	25	0.04	22	1,320
Heat Loss-Walkout Wall	0	0	0.00	-	-
Heat Loss-Walls	1,751	10	0.10	67	11,970
Heat Loss-Walls (Supplemental)	0	0	0.00	67	-
Heat Loss-Windows (low-E) Default (R-3)	345	3	0.33	67	7,705
Heat Loss-Windows Standard Glazing (R-2)	0	2	0.50	67	-
Heat Loss-Windows (low-E) Triple Glaze (R-6)	0	6	0.17	67	-
Heat Loss-Doorwalls	0	3	0.33	67	-
Heat Loss-Doorwalls	0	3	0.33	67	-
Heat Loss-Doors	63	5	0.20	67	84
Heat Loss-Roof SIP (on Timber)	0	0	0.00	67	-
Heat Loss-Roof SIP (on SIP)	0	0	0.00	67	-
Heat Loss-Attic (Uninsulated Roof Rafters)	1,500	22	0.05	67	4,653
Heat Loss-Skylights	0	3	0.33	67	-
Building Envelope Heat Loss					28,661 BTUH

FIGURE 5a

REPLACEMENT SHEET

5	ASHRAE 99% Design Dry Bulb Temp (deg F)
72	Indoor Design Temp (deg F)
67	Delta T
68,097 Total BTUH Demand	
1.4	Furnace Sizing Factor
120,000	Furnace Size at 80%
Meets Energy Star:	
106,000	Furnace Size at 90%
102,000	Furnace Size at 94%
96,000	Furnace Size at 100% (ELECTRIC)

REPLACEMENT SHEET

FIGURE 5b

Envelope Tightness		ACH (Air Changes / Hour)			Design Occupancy:			
Select >	2 Tight Stick Built	1.00	CFM	ACH	Constant	Volume	Delta T	Heat Loss (BTUH)
Infiltration / Ventilation			545	1.00	1.00	32,700	67	39,436
Natural Infiltration			0	1.00	1.00	32,700	18	
Mechanical Ventilation w/AUX			108	Min Target CFM				
75% AAUX Efficiency								
Envelope + Infiltration Heat Loss =		68,097 BTUH						
Furnace AFUE =		94%		3	<Select Furnace Efficiency			
D = Degree Days =	6,235	Berrien City, MI						
T = Temp diff =	67	degrees						
V = Fuel value =	1,052	BTUh per						
V = Fuel value =	91,743	BTUh per						
V = Fuel value =	3,413	BTUh per						
V = Fuel value =	1.36	Correction factor that includes the effects of rated full load efficiency, part load performance, over sizing and energy conservation devices.						
CF1 =								
CF2 =	0.71	Empirical correction factor for heating effect versus 65 degrees F degrees-days.						
E = Annual Energy Consumption =	148,509	cu ft natural gas						
	1,703	gallons of propane						
	-	KWH of electricity (100% Eff)						
Annual Heating Cost =	\$1,351.43	NGAS						
Annual Heating Cost =	\$2,656.57	PROPANE						
Annual Heating Cost =	\$0.00	ELECTRIC						

FIGURE 5C REPLACEMENT SHEET

HOME SPECIFIC QUALITY / COST SELECTIONS
SUBSYSTEMS AND CONSTRUCTION ASSEMBLY OPTIONS

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SYSTEM	SUBSYSTEM	Selection CONSTRUCTION ASSEMBLY OPTIONS			quan	unit	unit \$	total \$	BASELINE	TOTAL Savings
01 Foundation	011 Standard Foundations									
	011.10 Spread footings [timber columns]	1	Not Used		0	NCOLS	\$64.53	\$0	\$0	\$0
	011.10 Spread footings [tally columns]	2	12" thick-36"x36"; forms, rebar, concrete		4	EA	\$92.92	\$372	\$372	\$0
	011.20 Spread footings [foundation walls]	4	12" thick x 24" wide; forms, reinf, direct chute		108	LF	\$15.36	\$1,659	\$1,659	\$0
	011.20 Spread footings [foundation walls]	5	12" thick x 24" wide; forms, reinf, direct chute, PVC6" gravel drainbed		164	LF	\$20.15	\$3,312	\$3,312	\$0
	011.30 Foundation Wall (4' high)	2	Poured-10'; bitum/damp; sill plates		150	LF	\$27.07	\$4,061	\$4,061	\$0
	011.40 Excavation: Foundation Wall Footing	2	4' depth spread flg excav, sand/gravel, backfill		864	SF	\$0.56	\$483	\$483	\$0
	012 Special Foundations	1	No additional special foundations		2,364	SF	\$0.00	\$0	\$0	\$0
02 Slab on Grade										
	021.00 Ground Floor Slab on Grade	3	Not Used		0	SF	\$0.00	\$0	\$0	\$0
	021.00 Garage Floor Slab on Grade	2	5" slab w/4" gravel base; 6 mil vap; expand mat† W1.4W1.4; steel trowe		864	SF	\$3.11	\$2,690	\$2,690	\$0
	021.00 Basement Slab on Grade	3	4" slab w/4" gravel base; 6 mil vap; expand mat† W1.4W1.4; steel trowe		1,500	SF	\$2.82	\$4,224	\$4,224	\$0
	021.00 Crawlspace Floor	1	Not Used		0	SF	\$0.00	\$0	\$0	\$0
	021.10 Ground Floor Slab Insulation	1	Not Used		0	SF	\$0.00	\$0	\$0	\$0
	021.10 Basement Slab Insulation	1	Not Used		0	SF	\$0.00	\$0	\$0	\$0
022 Excavation: Basement / Crawl										
	022.00 Walkout Stand & gravel excav, backfill; compaction B' flgs; rough grade	3	Assumes off-site hauling NOT required (Assumes on site placement of:	0	500	CY	\$6.11	\$3,057	\$3,057	\$0
	022.00 Off Site Trucking	1			0	CY	\$0.00	\$0	\$0	\$0
023 Basement Walls										
	023.00 Exposed Basement Wall Framing	2	Poured-10'; bitum/damp; sill plates		1,101	BWA	\$7.11	\$7,823	\$7,823	\$0
	023.10 Basement Wall Insulation	1	Not Used		0	BWA	\$0.00	\$0	\$0	\$0
		4	3" rigid-25 PSI Compressive (R-15) ENERGY STAR COMPLIANT		1,101	BWA	\$1.39	\$1,528	\$1,528	\$0

REPLACEMENT SHEET

FIGURE 6a

HOME SPECIFIC QUALITY / COST SELECTIONS
SUBSYSTEMS AND CONSTRUCTION ASSEMBLY OPTIONS
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		MASTER [BASELINE] Resi-Cost™		MASTER [BASELINE] Resi-Cost™		
		TOTAL FINISHED AREA: 2,400 SF Berrien City, MI 3 Bedrom; 1 Full; 1 Half Baths		TOTAL CONSTRUCTED AREA: 4,764 SF 3 Bedrom; 1 Full; 1 Half Baths		
SYSTEM	SUBSYSTEM	Selection CONSTRUCTION ASSEMBLY OPTIONS				
		quant	unit	unit \$	total \$	
						BASELINE
						TOTAL Savings
01 Foundation	011 Standard Foundations					
	011.10 Spread footings (timber columns)	1	Not Used	0	\$64.53	\$0
	011.10 Spread footings (lally columns)	2	12" thick x 36"; forms, rebar concrete	4	\$32.92	\$372
	011.20 Spread footings (foundation walls)	4	12" thick x 24" wide; forms, reinf, direct chute	108	\$15.36	\$1,659
	011.20 Spread footings (basement walls)	5	12" thick x 24" wide; forms, reinf, direct chute, PVC & gravel drainbed	164	\$20.15	\$3,312
	011.30 Foundation Wall (#' High)	2	Poured-10'; bitum/damp; sill plates	108	\$27.07	\$2,924
	011.40 Excavation: Foundation Wall/Footin;	2	4' depth spread lug excav; sand/gravel; backfill	864	\$0.56	\$483
	012 Special Foundations	1	No additional special foundations	2,364	\$0.00	\$0
02 Substructure	021 Slab on Grade					
	021.00 Ground Floor Slab on Grade	3	Not Used	0	\$0.00	\$0
	021.00 Garage Floor Slab on Grade	2	5' slab w/4" gravel base; 6 mil vap; expan mat'; W1.4/W1.4; steel trowe	864	\$3.11	\$2,690
	021.00 Basement Slab on Grade	3	4' slab w/4" gravel base; 6 mil vap; expan mat'; W1.4/W1.4; steel trowe	1,500	\$2.82	\$4,224
	021.00 Crawlspace Floor	1	Not Used	0	\$0.00	\$0
	021.10 Ground Floor Slab Insulation	1	Not Used	0	\$0.00	\$0
	021.10 Basement Slab Insulation	1	Not Used	0	\$0.00	\$0
	022 Excavation: Basement / Crawl	3	<ERROR> Must Select '1' or '2'-Full Basement Option	500	CY	<ERROR> #VALUE!
	022.00 Off Site Trucking	1	Assumes off site hauling NOT required (Assumes on site placement of:	0	CY	\$0.00
	023 Basement Walls	2	Poured-10'; bitum/damp; sill plates	1,479	BWA	\$7.11
	023.00 Exposed Basement Wall Framing	1	Not Used	0	BWA	\$0.00
	023.10 Basement Wall Insulation	4	3" rigid-25 PSI Compressive R-15 ENERGY STAR COMPLIANT	1,479	BWA	\$1.39

Alternate Selections illustrating self documenting line item changes to component costs and Self-Connecting feature (Line 022 Basement Excavation) wherein “ERROR**” was triggered when “Walkout Basement” was deselected in ‘40’ Design Characteristics, requiring selection of Full Basement excavation options.**

FIGURE 6b
REPLACEMENT SHEET

Residential Cost Estimation Construction Summary “Component Options”

- **Control Document** that provides outline construction descriptions of the building systems selected by the Owner.
- **Serves a similar purpose as site and engineering drawings would provide** in that scope requirements are called out for site, structural, mechanical, electrical and plumbing systems.
- Controls which material options are to be selected in cases where options exist in the guide specification sections.

Guide Specifications CSI MASTERFORMAT Divisions 1-16

Detailed Guide Specifications including all 16 CSI Divisions

- Division 1 – General requirements
- Division 2 – Site Construction
- Division 3 – Concrete
- Division 4 – Masonry
- Division 5 – Metals
- Division 6 – Wood and Plastics
- Division 7 – Thermal and Moisture Protection
- Division 8 – Doors and Windows
- Division 9 – Finishes
- Division 10 – Specialties
- Division 11 – Equipment
- Division 12 – Furnishings
- Division 13 – Special Construction
- Division 14 – Conveying Systems
- Division 15 – Mechanical
- Division 16 - Electrical

Refers to Control Document Section for Option Selections

REPLACEMENT SHEET

FIGURE 7